# III. NEW SPECIES OF NOTODONTIDÆ FROM SOUTH AMERICA IN THE CARNEGIE MUSEUM.

By WILLIAM SCHAUS.

(PLATE IV.)

#### INTRODUCTORY NOTE.

From time to time we have had the pleasure of welcoming at the Carnegie Museum Mr. William Schaus and his friend Captain Barnes. Mr. Schaus, with engaging kindness and characteristic enthusiasm, has volunteered to devote himself to the arrangement of certain groups of neotropical lepidoptera, with which his studies have made him familiar, and with which he is probably better acquainted than any other student in America. Among the moths recently in part arranged by him are the *Notodontidæ* of tropical America. As a result of his investigations he has discovered that certain of the species in the collection of the Carnegie Museum are nondescript, and he has kindly furnished us with descriptions of them, which are now printed. The plate includes, besides figures of the types of the new species, figures of several others named by previous writers and by Mr. Schaus, who has determined them. W. J. Holland, Editor.

#### Genus Nystalea Guenée.

# 1. Nystalea albipicta sp. nov. (Plate IV, fig. 3).

Male:—Head and palpi cream-white; the palpi streaked above with mahogany-red on second joint, the third joint with a similar point at tip; oblique lines on frons; crest on vertex and also collar, orange-cinnamon. Thorax purplish fuscous, with white spots on shoulders; a few mahogany-red hairs on patagia. Abdomen above benzo-brown; a lateral tuft at fourth segment, underside light buff. Legs partly white; the tibiæ and base of tarsi with long tufts of hairs mottled with violaceous brown and mahogany-red; the hind tibiæ with a large white spot on first joint. Fore wings natal-brown; edge of costa, subcostal, and submedian basally, brownish gray; a white streak on costa from base to antemedial line; antemedial line double, black, filled in with orange-brown and white, interrupted on subcostal, be-

low submedian fold consisting of a single rufous line, followed on costa and across median by white spots, and a small white spot beyond the latter in cell; space between antemedial and medial lines suffused with purplish fuscous; medial line double, wavy, partly hazel followed by a large white space from costa not reaching median except at discocellular, around which the reniform, which is broad and incurved, is outlined in black; between veins five and six the white space extends to post-medial; some purplish fuscous suffusion from vein three to below vein two; postmedial line partly double, defined by tawny shading, vertical from costa to vein three, then slightly inbent; veins two to four with white and black points; a white space from post-medial to apex constricted medially, its lower edge irregular proximally from just above vein five, at subterminal reaching vein six, at termen from just below vein seven to vein eight; some brown spots on costa towards apex; some white scaling beyond post-medial between veins two and four, and an interrupted fine white line, outset between four and six; a velvety dark brown subterminal line from costa before apex slightly incurved below vein seven and touching termen at vein three, then inset irregularly to tornus; the white spaces are partly irrorated with black; veins from cell terminally wood-brown; cilia fuscous with white spots from vein four to tornus, and with white points at veins towards apex. Hind wings benzo-brown, the base whitish; cilia tipped with whitish. Fore wings below fuscous, the costa tinged with buff; termen white, cut by veins and subterminal lines into spots. Hind wings below white, the costa tinged with ochraceous-tawny; the outer margin fuscous. Expanse: 54 mm.

The species comes nearest N. guzmani Schaus.

Habitat: Pied Saut, Oyapok River, French Guiana.

The type is in the Carnegie Museum, C. M., Acc. No. 6173, March 1918 (S. M. Klages coll.).

# 2. Nystalea arimathea sp. nov. (Plate IV, fig. 8).

Male:—Palpi whitish buff, with a dark chestnut-brown streak above and a fine lighter brown streak below. Head mottled dark brown and light buff, the frontal tuft whitish, collar dark chestnut-brown, tipped behind with buff and whitish. Thorax cinnamon-buff. Abdomen above buffy brown, underneath pale ochraceous-buff. Legs pale ochraceous-buff, the tibiæ and hind tarsi fringed with hair. Fore wings cinnamon-buff; a dark antemedial point on submedian, a black point at origin of vein two; a fine dark line on median from vein two to vein four; a brownish cinnamon shade from base of costa through cell; a fine dark brown line on costa from before middle to post medial line and four similar lines below it, becoming shorter proximally, the

lowest on subcostal bifurcating beyond cell; a post-medial whitish shade oblique to vein three, then down bent, preceded by short streaks on veins five to one including submedian fold, outwardly by an ochraceous-brown shade becoming cinnamon-brown towards a fine outer white line, which is inbent on vein eight then wavily outcurved to near subterminal and not extending below vein three, preceded between veins five and eight by still darker trigonate streaks; space beyond fuscous crossed by a fine dark chestnut-brown line almost straight from vein nine to vein three, incurved to vein two, and inset below it, edged proximally by a fine yellow-buff line, distally by a fine whitish gray shade; some brownish marginal shading from vein four to costa at apex; cilia dark brownish gray with fuscous spots at veins. Hind wings smoky-white, the termen broadly fuscous at apex, narrowly at anal angle; cilia white. Fore wings below brownish buff, becoming darker towards subterminal line, this latter preceded by a whitish shade widest on costa, not extending below vein five; termen narrowly whitish gray.

Hind wings below white; a pinkish buff shade at base of costa; termen with fuscous shading from below apex to anal angle. *Expanse*: 34 mm.

A very distinct species.

Habitat: Pied Saut, Oyapok River, French Guiana, type, C. M., Acc. No. 6173, Feb. 1918 (S. M. Klages coll.).

#### Genus Kalkoma Schaus.

# 3. Kalkoma cynedryda sp. nov. (Plate IV, fig. 5).

Male:—Palpi light buff with a broad lateral dark reddish brown streak on its upper edge, not quite reaching end of second joint. From whitish buff; vertex drab-gray. Collar and thorax mottled drab-gray and whitish buff; a large chestnut-brown spot on collar medially. Abdomen above drab, with whitish segmental lines; subdorsal dark spots at base and a chestnut-brown transverse band on next to last segment; underneath light buff. Legs light buff; the fore tibiæ with fuscous brown and white spots. Fore wings light cinnamon drab, shaded with whitish buff at base; subbasal paired spots on costal edge; a streak above subcostal, paired antemedial spots on costal edge and paired spots at subcostal, two upright streaks across costal margin post-medially, all dark chestnut-brown; a wavy dark line basally below cell; from antemedial and post-medial spots paired cinnamon-drab lines cross the wing; the antemedial macular, the post-medial proximal line heavier, inaugled on costa before spot, outbent, wavy and vertical to vein two, then incurved to inner margin; the distal line very fine, lunular, followed by a series of chestnut-brown spots on interspaces, the spot above submedian more heavily marked; a faint subterminal

whitish drab shade very irregular, somewhat macular, preceded on costa by an olive-brown shade; dark angled lines on interspaces before termen; cilia ochreous. Hind wings buffy-avellaneous. Wings below buffy-avellaneous. *Expanse*: 37 mm.

Near K. pylaon Druce.

Habitat: Pied Saut, Oyapok River, French Guiana, type, C. M., Acc. No. 6173, March 1918 (S. M. Klages coll.).

#### Marthantia gen. nov.

Male:—Antennæ fasciculate to beyond middle. Palpi upturned; second joint stout, smoothly scaled, with short fringe below, reaching frons; third joint short, smooth, the tip round. Abdomen smooth, with dorsal crests on three basal segments; mid and hind tibiæ fringed, the inner spurs twice the length of outer. Fore wings short for width; the apex rounded; termen straight below apex, bulging and rounded from vein four to tornus; veins three and four apart from lower angle; vein five from above middle of discocellular; areole short and narrow from end of cell; vein six from base of areole; veins seven, eight, nine, and ten from areole; cell below clothed with long hairs. Hind wings broad; termen rounded, appearing produced; termen obliquely truncate from vein two to anal angle; veins three and four from a point; vein five from middle of discocellular; veins six and seven stalked; costa nearly straight, with upturned fringe; vein eight close to seven to near end of cell, then diverging widely.

The genus belongs near Antiopha Schaus. Type of genus M. stelligera Schaus.

# 4. Marthantia stelligera sp. nov. (Plate IV, fig. 6).

Male:—Palpi fuscous-brown, first joint with lateral white spot and fringed with white below, second joint terminally white, except above, third joint white. Head dark grayish brown. Collar and thorax brownish drab. Abdomen above grayish brown with pale segmental lines; underneath light buff. Legs light buff streaked with fuscous-brown; fore femora white; tibiæ white with black rings. Fore wings saccardo's umber at base, the outer half isabella; veins black, irrorated with white; an isabella antemedial line defined by dark brown starting from a white crescent on costa, lunular, slightly outcurved, followed by some white scales below cell; a double fuscous-brown medial shade, the two lines apart on costa; interrupted above subcostal, almost suffusing below cell, then widely diverging, the proximal shade curved and inbent along inner margin to near base, the distal shade curved to inner margin preceded below fold by another dark broken line and followed below vein two by the faint post-medial

brownish line, this line being outcurved below cell and inbent at vein three and is barely traceable, but marked by a white line on costa; a faint pale line on discocellular, defined by brown; post-medial line followed by white points on veins, those from vein five to costa on a dark brown shade; costa before apex brown, with three white points, a fourth at apex being the beginning of a series of marginal white spots with fuscous edging; faint traces of a subterminal dentate macular line with black spots above and below vein seven; terminal white points on veins; cilia gray-brown with darker spots at veins.

Hind wings fuscous, the costa and base indistinctly whitish.

Fore wings below purplish brown, the costa narrowly and termen, whitish; costa brown towards apex with three white points; marginal black points and a broken dark terminal line; cilia white tipped with purplish brown. Hind wings below whitish; brown irrorations forming a medial line; a large fuscous spot on terminal space from vein seven to below vein two. *Expanse*: 35 mm.

Habitat: Pied Saut, Oyapok River, French Guiana, type, C. M., Acc. No. 6173, Feb. 1918 (S. M. Klages coll.). A co-type in National Museum.

#### Genus Farigia Schaus.

#### 5. Farigia benepicta sp. nov. (Plate IV, fig. 4).

Male:—Palpi snuff-brown shaded above with black-brown, the fringe tipped with some whitish hairs, especially on third joint. Head hazel with some white hairs. Collar and front of thorax and patagia chestnut-brown thickly mottled with white hairs, the shoulders white; thorax and patagia posteriorly aniline-yellow. Abdomen above blackbrown, the dorsal crests mottled chestnut-brown and aniline-yellow; body below ochraceous-tawny; throat and fore coxæ cinnamon-rufous, fore tibiæ outwardly white, and with large hazel markings in front. Fore wings chiefly cinnamon-drab thickly irrorated with white, especially on medial space; double subbasal chestnut-brown line, outangled on costa, then inbent to base, edged with white, containing some light greenish yellow scales; some pale blue-green irroration on costa antemedially; from before middle of costa a rather broad greenish yellow line, well inbent and straight to submedian, outset and outcurved on inner margin, preceded and followed by pale bluegreen irrorations, those on distal side edged by some chestnut-brown lunules; some dark scales on discocellular with small white spots above and below; a fine indistinct post-medial line wavily outcurved followed by light blue-green irrorations, then by a broad chestnut-brown shade evenly outcurved, outwardly edged with aniline-yellow, and then on costa by a triangular chestnut-brown spot and some white scaling from costa to vein six; marginal chestnut-brown streaks, inset

below veins and oblique to termen at following vein; cilia fuscousbrown, with faint white points at veins. Hind wings brussels-brown; cilia with white points at veins. Wings below suffused with light buffy-brown. *Expanse*: 40 mm.

Habitat: Pied Saut, Oyapok River, French Guiana, type, C. M., Acc. No. 6173, March 1918 (S. M. Klages coll.).

#### Genus Notoplusia Schaus.

#### 6. **Notoplusia oyapoca** sp. nov. (Plate IV, fig. 13, ♂).

Male:—Palpi, throat, and from anteriorly mikado-brown mottled with light buff; frons otherwise and collar pinkish buff; hairs on vertex and a transverse line on collar in front mikado-brown. Thorax reddish brown in front, fuscous behind, the patagia also fuscous with some mars-brown on shoulders. Abdomen above fuscous, the terminal segment and anal hairs light olive-gray; underneath whitish. Legs mostly mars-brown, the tibiæ paler, with fine white rings. Fore wings pale olive-gray; basal third mars-brown with blackish streaks on costa, in cell, and on submedian vein, the outer edge inbent from costa to median, then slightly incurved below it; inner margin to tornus mouse-gray; reniform finely outlined in black, slightly incurved and with some brown scales on its outer edge; a fine dark dentate medial line outcurved close around discocellular; very faint traces of a fine double post-medial line followed on costa by a mars-brown spot, from which a black line extends along vein six to termen, where it has a smaller brown spot above it; a post-medial brown patch below vein two; vein five black terminally, the other veins irrorated with black; a subterminal mars-brown line slightly sinuous from vein eight to vein three, then somewhat inset on each interspace below it; cilia dark gray or brown at apex with white spots at veins. Hind wings whitish, suffused with brownish gray especially on inner margin; the termen narrowly brown; cilia mostly gray-brown. Fore wings below whitish with brownish gray suffusion; costa to beyond middle mars-brown; two indistinct shades beyond cell from spots on costa to submedian fold; apex suffused with brown; a subterminal shade. Hind wings below whitish; a medial shade on costa followed by a gray line to inner margin; some darker shading terminally from apex narrowing to a fine line below vein four. Expanse: 33 mm.

Near N. eunoteloides Schaus. Distinguished at once by the black line on vein six.

Habitat: A, type, Pied Saut, Oyapok River, French Guiana. C. M., Acc. No. 6173, Feb. 1918 (S. M. Klages coll.). Q, allotype, Puerto Suarez, Bolivia, Nov. 1908 (Steinbach coll.). A co-type in National Museum.

#### 7. Notoplusia boliviensis sp. nov. (Plate IV, fig. 14).

Male:—Palpi mouse-gray, the first joint light buff. Head and collar light ochraceous-buff. Thorax above and below, abdomen dorsally, fore and mid tibiæ mouse-gray; abdomen below and hind tibiæ buffwhite; tarsi with black rings. Fore wings olive-gray faintly suffused with light avellaneous on post-medial interspaces; base of costa and cell avellaneous crossed by a double subbasal black line; a brown-black antemedial shade, slightly outcurved on costa, its inner edge with projecting lines, inbent below cell not extending below vein one, closely followed by a fine brown-black line, faintly curved from costa to median, inbent, outcurved from fold to submedian and outbent below it; a faint wavy medial line, and a post-medial fine lunular black line, curved around end of cell, both starting from light brown streaks on costa; a brown lunule on costa beyond; veins from cell irrorated with black; a subterminal blackbrown spot below vein two, with a similar shading below it on inner margin; a fine black line on vein six from near the costal lunule to termen; a subterminal fine black-brown line from vein seven to vein four, preceded by a short dark streak on vein five; small dark spots on interspaces from vein four to submedian; no terminal line; cilia white with avellaneous spots. Hind wings whitish, the veins light buff; costal margin with brownish scales. Fore wings below shaded with gray, the inner margin and outer half of costa whitish; the costal lunule well marked, followed by three brown points on costal edge, these being present but fainter on upper side; traces of post medial and subterminal lines. Hind wings below white. Expanse: 32 mm.

Habitat: Chiquitos, Eastern Bolivia, type, C. M., Acc. No 4543, March 1909 (José Steinbach coll.).

# Genus Talmeca, Schaus.

# 8. Talmeca offa sp. nov. (Plate IV, fig. 10).

Male:—Palpi white, a dark lateral streak on second joint, and a short fine lateral paler streak on third joint. Frons white; tuft on vertex, collar, and thorax light drab, the tuft mottled with benzobrown; a similar shade on collar and thorax medially adjoining collar. Abdomen above benzo-brown; some white hairs at base; anal segment with whitish mottling; body below and legs whitish, the latter mottled with gray, the tarsi drab-gray. Fore wings light drab with some dark irrorations on costal margin and from submedian fold to inner margin; a benzo-brown streak at base of costa and a broad shade from base of cell to termen between veins four and five; these veins and a streak on interspace still darker; a white shade from

base below cell to termen between veins two and four with light drab shading and streaks near termen; veins six and seven indistinctly whitish, with darker shading above and below vein seven; veins six and eight terminally with fuscous streaks; a faint dark terminal line with black points on interspaces; cilia white. Hind wings white, the veins terminally with fine brownish irrorations. Fore wings below whitish, the anterior half shaded with drab, becoming paler towards apex. *Expanse*: 33 mm.

Near Talmeca perplexa Schaus.

Habitat: Province del Sara, Bolivia, March 1911, type, C. M., Acc. No. 5058 (José Steinbach coll.).

#### Genus CHADISRA, Walker.

### 9. Chadisra hollandi sp. nov. (Plate IV, fig. 7).

Male:—Palpi mummy-brown above, underneath white with some brown hairs. Frons white, laterally mottled with brownish hairs; vertex, collar, and front of thorax dresdren-brown, mottled with light buff hairs, the portion on thorax forming the apex of a triangle, the two sides edged with mummy-brown; thorax otherwise and patagia white, the latter with a few brown hairs. Abdomen white; a dorsal ochraceous tawny spot at base. Legs white partly mottled with buffbrown, the tarsi buff-brown. Fore wings white; a triangular spot resting on costa near base, its apex reaching median vein, two points on costa medially and a large triangular space resting on costa postmedially, all dresdren-brown, with slightly darker edges; the postmedial triangle has a blunt apex near vein four and expands slightly at vein six; a few brown scales on inner margin, and a small terminal spot above tornus. Hind wings white. Wings below thinly scaled, white, the post-medial triangle partly indicated with four white points on costa. Expanse: 40 mm.

It is a pleasure to name this beautiful species in honor of Dr. W. J. Holland.

Habitat: Pied Saut, Oyapok River, French Guiana, type, C. M., Acc. No. 6173, March 1918 (S. M. Klages coll.).

#### Genus Rifargia, Walker.

#### 10. Rifargia elgiva sp. nov. (Plate IV, fig. 1).

Male:—Palpi fuscous black, with four fine ochraceous-buff lines. Head and thorax thickly mottled with brown-gray, fuscous, and light buff hairs. Collar paler, mostly light ochraceous-buff, with a transverse central dark line. Abdomen above army-brown, with whitish

mottling on last segment, the anal hairs spotted with brown-black; underneath pale ochraceous buff. Tibiæ hairy, mottled like thorax, the hind tibiæ paler, with fewer dark hairs; tarsi dark brown with paler rings. Fore wings thickly mottled with brown, smoke-gray, and black, only the outer half being predominantly wood-brown; a fine black-brown line below cell from base to antemedial line; a subbasal fine brown-black line inbent from costa to submedian, followed from costa to fold by a broader line, then by some whitish points on subcostal; a small orbicular spot defined by some whitish scales; antemedial line double, brown-black, wavily curved and inbent to inner margin; reniform linear, brown-black, surrounded narrowly by a whitish shade, its center mottled smoke-gray and white, followed by a double medial dentate line, the inner line more heavily marked; post-medial line double, the proximal line brown-black, the distal line paler and faint, oblique from costa and slightly upbent at vein seven, down-turned to six, slightly inset from six to four, outcurved to three, inbent to two, vertical to submedian, incurved on inner margin; the veins all darker, with some white points and irrorations; a subterminal irregular dentate shade, darker and broader between veins six and eight, intensified by short black streaks; a marginal fine black line parallel with termen; cilia with white points at veins and dark brown shading on either side.

Hind wings dull buffy brown, the inner margin broadly clothed with darker hairs; a faint post-medial pale shade darker on either side; a slightly darker marginal and terminal line with some whitish scaling between them; a fuscous black spot at anal angle, crossed by a white crescent; cilia tipped with white. Fore wings below whitish, irrorated with wood-brown; inner margin buffy gray-brown; a dark streak at end of all; post-medial and subterminal dentate brownish shades; outer half of costa with fuscous brown and whitish gray spots. Hind wings below white; medial, post-medial, and subterminal buffy brown shades on costa, and also on vein two above termen, and at anal angle. *Expanse*: 55 mm.

A cotype in National Museum.

Habitat: Pied Saut, Oyapok River, French Guiana, type, C. M., Acc. No. 6173, February 1918 (S. M. Klages coll.).

# Genus Hyperæschra, Butler.

# 11. Hyperæschra tropicalis sp. nov. (Plate IV, fig. 9).

Male:—Head, collar, and thorax snuff-brown mottled with a few whitish hairs. Abdomen above darker brown, with faint fuscous segmental lines. Body below buffy brown, fore tibiæ mottled with snuff-brown. Fore wings snuff-brown mottled with whitish hairs, the

lines and shadings darker; a subbasal line followed and preceded by small whitish patches on costa, in and below cell; a similar patch antemedially below cell; a double medial line interrupted below subcostal and by veins, slightly inbent from costa to inner margin; a dark line through cell, and spots at end; a black line on discocellular followed by some whitish scaling, veins from cell partly black, especially on terminal space; a faint post-medial shade outangled on vein six, followed by a fine fuscous line wavily outbent to near middle of inner margin with white scales beyond it on costal margin; a parallel subterminal shade somewhat macular; a marginal fine line followed by white scaling above vein seven; a faintly marked terminal line. Hind wings clear snuff-brown tinged with light buff at base, and similar hairs on inner margin. Fore wings below buffy brown, the inner margin whitish. Hind wings below whitish shaded with buffy brown especially on costal margin. Expanse: 40 mm.

Habitat: Pied Saut, Oyapok River, French Guiana, type, C. M., Acc. No. 6173, March 1918 (S. M. Klages coll.). A co-type in National Museum.

#### EXPLANATION OF PLATE IV.

Fig. 1. Rifargia elgiva sp. nov., &, type.

Fig. 2. Phedosia riachuela Jones, &.

Phedosia riachuela F. D. Jones, Trans. Ent. Soc. Lond., 1912, p. 426. Puerto Suarez, Bolivia, November 1908, C. M., Acc. No. 3758 (Steinbach coll.).

Fig. 3. Nystalea albipicta sp. nov., 3, type.

Fig. 4. Farigia benepicta sp. nov., &, type.

Fig. 5. Kalkoma cynedryda sp. nov., 3, type.

Fig. 6. Marthantia stelligera sp. nov., of, type.

Fig. 7. Chadisra hollandi sp. nov., 3, type.

Fig. 8. Nystalea arimathea sp. nov., o, type.

Fig. 9. Hyperæschra tropicalis sp. nov., &, type.

Fig. 10. Talmeca offa sp. nov., &, type.

Fig. 11. Nystalea olivescens Dognin, d.

Nystalea olivescens Dognin, Hétérocères Nouveaux de l'Amérique du Sud, No. 12, 1916, p. 7, Mana River, Fr. Guiana, May 1917, C. M., Acc. No. 6008 (Klages coll.).

Fig. 12. Lepasta lignistriata Schaus, d.

Lepasta lignistriata Schaus, Trans. Ent. Soc. Lond., 1901, p. 278. Puerto Suarez, Bolivia, November 1908, C. M., Acc. No. 2758 (Steinbach coll.).

Fig. 13. Notoplusia oyapoca sp. nov., &, type.

Fig. 14. Notoplusia boliviensis sp. nov., of, type.

Fig. 15. Lepasta lignistriata Schaus, Q.

Fig. 16. Heorta cilla (Dognin) d.

Hippia cilla Dognin, Ann. Soc. Ent. Belg., LII, 1908, p. 164. Chiquitos, Bolivia, March 1909, C. M., Acc. No. 4543 (Steinbach coll.).

Fig. 17. Heorta viridans (Dognin) Q.

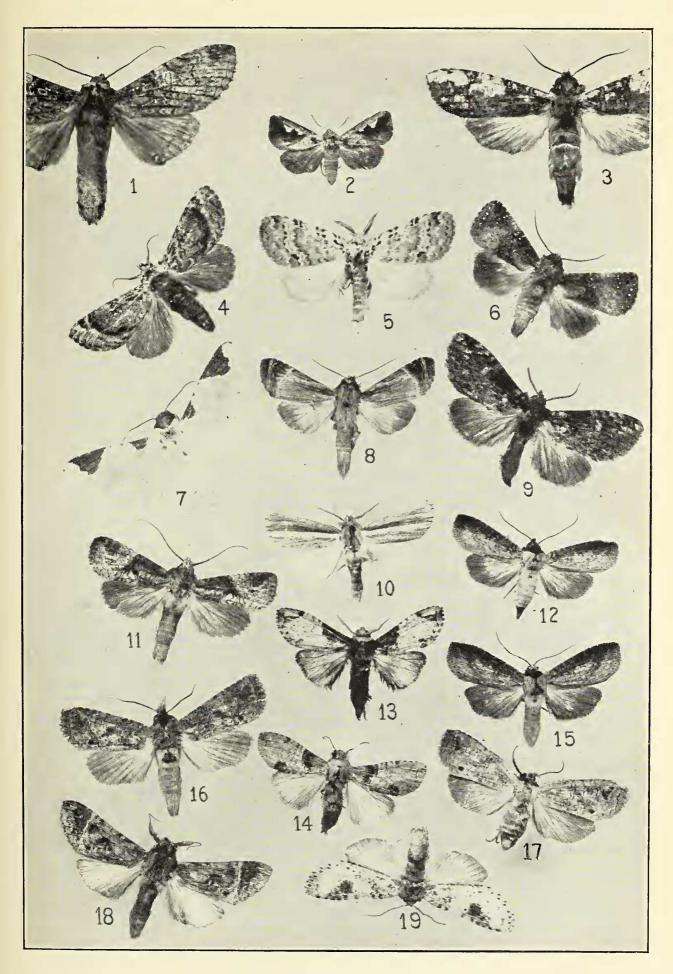
Hippia viridans Dognin, Ann. Soc. Ent. Belg., LIII, 1909, p. 78. Puerto Suarez, Bolivia, Nevember 1908, C. M., Acc. No. 3758 (Steinbach coll.).

Fig. 18. Dasylophia guarana (Schaus) &.

Œdemasia guarana Schaus, Proc. Zoöl. Soc. Lond., 1892, p. 331. Las Quiguas, Esteban Valley, N. Venezuela, March 1919, C. M., Acc. No. 5538 (Klages coll.).

Fig. 19. Malocampa punctata (Stoll) small Q.

Phalæna punctata Stoll, in Cramer, Pap. Exot., IV, 1782, Pl. 307, fig. F. Puerto Suarez, Bolivia, December 1908, C. M., Acc. No. 3758 (Steinbach coll.).



South American Notodontidæ.